

REMARKS/ARGUMENTS

Claims 3 and 5 have been amended to correct "interations" to --iterations-- to correct typographical errors.

In paragraphs 3 and 4, claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements. The examiner states that the definition of the variable " $v_n$ " used in the claimed equations is omitted. The rejection is traversed, and reconsideration is requested. Claims 1, 3, and 5 have been amended to make clear that  $v$  is a value according to the formula which is given in the claims. As each element in the formula is defined in the claims, the value of  $v$  is therefore defined and not omitted. The variable " $n$ " in the formula is expressed in the claim as the number of the iteration, and the variable " $u$ " is defined as the target control quantity. It is submitted that the variable " $v_n$ " is not omitted and the claims are allowable under 35 U.S.C. 112, second paragraph, which allowance is requested.

In paragraphs 3-13, the examiner has rejected claims 1-6 under 35 U.S.C. 101 as being directed to non-statutory subject matter. The rejection is traversed, and reconsideration is respectfully requested. The examiner has quoted the test for patent eligibility as "useful, concrete and tangible result." The claimed result is useful as demonstrated in the graphic of FIG. 5 of the specification. Claimed are a method, computer program product, and system for providing a time-dependent simulation system model of a computer system in a computer memory for simulating performance of real hardware using values obtained for target control quantity  $u$  to define a new start value  $\chi$  for use in a repeated modeling step. As pointed out in

the specification, this results in an improved convergence behavior of efficiency, as illustrated in FIG. 5.

Claims 1-6 claim a method, program product, and system that have tangible elements and claims more than a computer that calculates a mathematical formula. Claims 1, 3, and 5 have been amended to claim, not only calculating values using given formulas, but claims providing a time-dependent simulation system model of a computer system in a computer memory for simulating performance of real hardware, and step e) which claims "storing in the computer memory for display, at least the value of  $\chi$  for the last iteration." As stated at paragraph [0018] and claimed in claims 1, 3, and 5, formula 6a is used to calculate the respective next value of the entry control quantities. This is supported at Fig. 5, reference number 50 which illustrates a curve of Utilization (%) versus Run Time which directly uses the inventive formula (6a, 6b) (see paragraph [0078]). This is also shown in FIG. 3 wherein the Stats box shows "records final performance statistics."

As far as "Concrete," the claimed method, program product and system has a result that is substantially repeatable, or the process substantially produces the same result again. In *State Street*, 149F.3d at 1373-73, 47, 47USPQ2d at 1601-02, the examiner quotes "[T]he transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of mathematical algorithm, formula, or calculation, because it produces 'a useful, concrete and tangible result' - a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades"). As is *State Street*, the present claimed invention performs a transformation of data representing entry and target control

quantities  $\chi$  and  $u$ , and by a machine through a series of claimed mathematical calculations and obtaining resulting actual values for each of the target control quantities  $u$  into a final respective next value of the entry control quantity  $\chi'$ , a useful, concrete and tangible result. Further, step e) of claims 1, 3, and 5 has been added to claim storing in the memory for display, at least the value of  $\chi$  for the last iteration.

It is respectfully submitted that claims 1-6, and amended herein, are allowable under 35 U.S.C. 101, which allowance is respectfully requested.

It is respectfully submitted that the present amendment is a proper amendment after final in that it places the application in condition for allowance or appeal.

It is respectfully submitted that the application is now in condition for allowance, which allowance is respectfully requested.

RESPECTFULLY SUBMITTED

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